

Title (en)  
Analyzing and sorting of wood veneers

Title (de)  
Untersuchen und Sortieren von Holzfunieren

Title (fr)  
Analyse et tri des feuilles de plaçage de bois

Publication  
**EP 1287912 A1 20030305 (EN)**

Application  
**EP 02396131 A 20020829**

Priority  
FI 20011755 A 20010904

Abstract (en)  
The invention relates to a method for increasing strength and/or reducing strength variations in multi-layer wood, plywood, and the like sandwich material. The method comprises measuring wood veneers (10) for dry substance density (  $\rho$  ) with high-frequency electromagnetic resonance (TEM) and additionally analyzing the homogeneity and/or grain structure of wood veneers from a wood veneer surface in the way of its darkness (R). If the wood veneer comprises a number of local first regions, which are darker than a predominant darkness of the veneer surface, the wood veneer in question has its calculated dry substance density (  $\rho$  C) established to be lower than its initially measured value (  $\rho$  M ). On the other hand, if the wood veneer has a substantially uniform darkness, the wood veneer in question has the longitudinal and lateral distribution of its dry substance density evaluated and, if those are substantially uniform, the calculated dry substance density (  $\rho$  C) of the wood veneer in question is established for a sorting process to be higher than its initially measured value (  $\rho$  M). Wood veneers are sorted on the basis of said calculated dry densities for at least two different density categories. In a first density category (A), the dry substance density is higher than in a second density category (B). Wood veneers are laid on top of each other for multi-layer wood, plywood, or some other sandwich material (20), the veneers included in the first density category serving as surface veneers (13) and the veneers included in the second density category serving as middle veneers (14). <IMAGE> <IMAGE>

IPC 1-7  
**B07C 5/14**; **B07C 5/342**

IPC 8 full level  
**B27D 1/00** (2006.01); **B07C 5/14** (2006.01); **B07C 5/342** (2006.01); **B27D 1/04** (2006.01); **G01N 33/46** (2006.01)

CPC (source: EP US)  
**B07C 5/14** (2013.01 - EP US); **B07C 5/342** (2013.01 - EP US); **G01N 33/46** (2013.01 - EP US)

Citation (search report)  
• [DA] EP 0616209 A2 19940921 - FINNFOREST OY [FI]  
• [A] DE 4104501 A1 19910905 - REMA CONTROL AB [SE]  
• [A] US 5335790 A 19940809 - GEIGER BERTRAM [AT], et al  
• [A] DE 9315506 U1 19931202 - GRECON GRETEN GMBH & CO KG [DE]  
• [A] DE 4421763 C1 19950323 - WILD MASCHINEN GMBH [DE]  
• [A] WO 0025115 A1 20000504 - ANDRITZ OY [FI], et al  
• [A] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 06 28 June 1996 (1996-06-28)

Cited by  
FR2982955A1; CN100368164C; EP1570920A1; US6974035B2; WO2022096785A1; WO2004091815A3

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)  
**EP 1287912 A1 20030305**; **EP 1287912 B1 20041020**; AT E279995 T1 20041115; AU 2002300861 B2 20070118; CA 2401100 A1 20030304; CA 2401100 C 20100209; DE 60201647 D1 20041125; DE 60201647 T2 20060309; FI 20011755 A0 20010904; FI 20011755 A 20030305; JP 2003191204 A 20030708; NZ 521130 A 20030725; RU 2002123395 A 20040310; RU 2265488 C2 20051210; US 2003042180 A1 20030306; US 6851559 B2 20050208

DOCDB simple family (application)  
**EP 02396131 A 20020829**; AT 02396131 T 20020829; AU 2002300861 A 20020904; CA 2401100 A 20020903; DE 60201647 T 20020829; FI 20011755 A 20010904; JP 2002258316 A 20020903; NZ 52113002 A 20020903; RU 2002123395 A 20020903; US 23440402 A 20020903